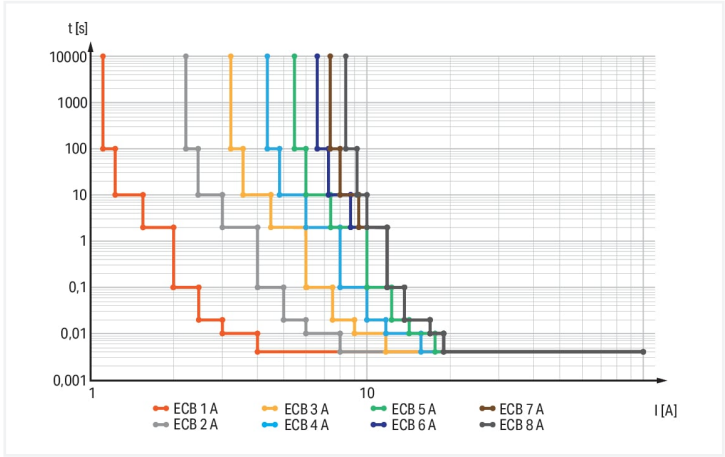
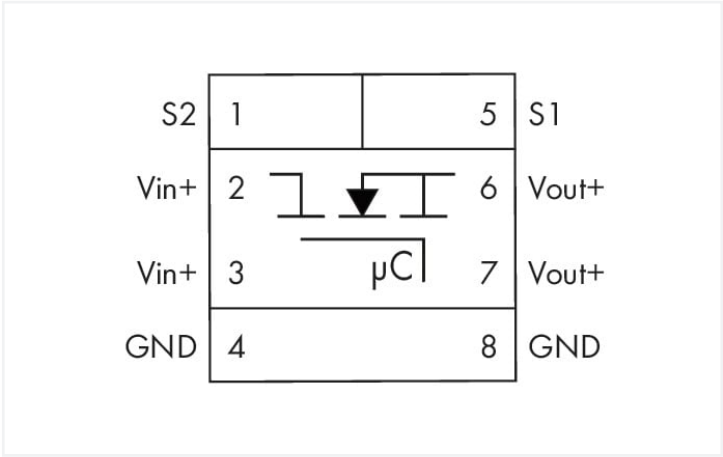
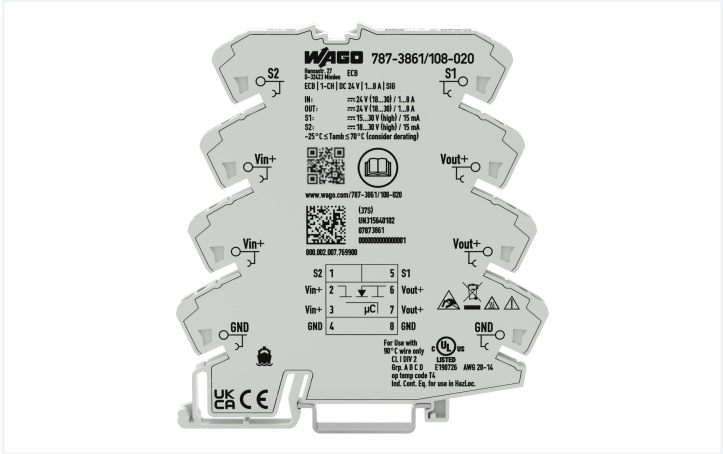
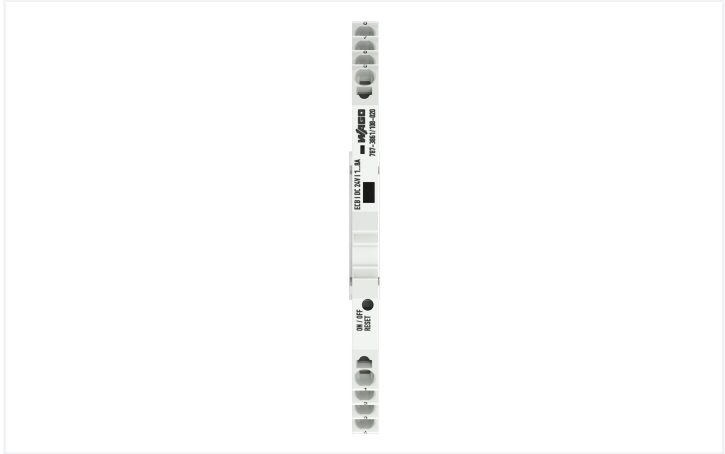


Data Sheet | Item Number: 787-3861/108-020

Electronic circuit breaker; 1-channel; 24 VDC input voltage; adjustable 1 ... 8 A; Signal contact

<https://www.wago.com/787-3861/108-020>



- Features:**
- Space-saving ECB with one channel
  - Reliably and safely trips in the event of an overload and short circuit on the secondary side
  - Switch-on capacity > 50,000  $\mu\text{F}$
  - Enables the use of an economical, standard power supply
  - Minimizes wiring via two voltage outputs and maximizes commoning options on both input and output sides (e.g., commoning of the output voltage on 857 and 2857 Series devices)
  - Status signal – adjustable as single or group message
  - Reset, switch on/off via remote input or local switch
  - Prevents power supply overload due to total inrush current thanks to time-delayed switching on during interconnected operation



Notes	
Note	The device is designed for use in SELV circuits. Depending on the output current, please use the approved minimum conductor cross-sections: 26 AWG (0.5 A); 24 AWG (1 A); 22 AWG (2 A); 20 AWG (3 A / 4 A); 18 AWG (5 A / 6 A); 16 AWG (7 A / 8 A)

Technical data			
Input		Output	
Nominal input voltage $U_{i\,nom}$	DC 24 V	Total number of channels (module)	1
Input voltage range	DC 18 ... 30 V	Nominal output voltage $U_{o\,nom}$	1 x DC 24 V
		Output voltage range	DC 18 ... 30 V ( $U_e$ – voltage drop)
		Voltage drop	$\leq 80\text{ mV}$ (1 A); $\leq 160\text{ mV}$ (2 A); $\leq 240\text{ mV}$ (3 A); $\leq 320\text{ mV}$ (4 A); $\leq 150\text{ mV}$ (5 A); $\leq 180\text{ mV}$ (6 A); $\leq 210\text{ mV}$ (7 A); $\leq 240\text{ mV}$ (8 A)
		Nominal output current $I_{o\,nom}$	1 x 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 A (adjustable)
		Default Setting	DC 1 A; switched off
		Trip time	10 ms ... 90 s (load-dependent)
		Switch-on capacity	
		Switch-on behavior	Time-delayed channel switching (load-dependent, min. 0 ms/max. 500 ms)

Signaling and communication	
Signaling	1 x Status LED (green/yellow/red) 1 x Signal output (18 ... 30 VDC, max. 0.015 A), Default setting: triggered
Operation status indicator	Green LED (channel OK) Red LED (channel switched off)
Remote input	1 x Control input (15 ... 30 VDC (active high); 0 ... 5 VDC (active low); max. 0.015 A)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.4\text{ W}$ (no load)
Efficiency (typ.)	98 %

Circuit protection	
Internal fuse	T 10 A

Safety and protection			
Isolation voltage (connectors – housing)	DC 1.5 kV	Insulation coordination (UL)	
Protection class	III	Overvoltage category	II
Protection type	IP20; per EN 60529	Pollution degree	2
Reverse voltage protection	No		
Transient suppression (primary)	Suppressor diode (33 V)		
Parallel operation of single channels	Not permitted		
Series operation	No		
MTBF	807,840 h		

Insulation coordination	
Overvoltage category	II
Pollution degree	2



Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 857 Series
Solid conductor	0.08 ... 2.5 mm² / 24 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Note (conductor cross-section)	Depending on the output current, use the conductor cross-sections tested and approved by UL: 26 ... 14 AWG (0.5 A); 24 ... 14 AWG (1 A); 22 ... 14 AWG (2 A); 20 ... 14 AWG (3 A / 4 A); 18 ... 14 AWG (5 A / 6 A); 16 ... 14 AWG (7 A / 8 A)

Physical data	
Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches

Mechanical data	
Mounting type	DIN-35 rail

Material data	
Fire load	0.634 MJ
Weight	53 g

Environmental requirements	
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	No derating
Operating altitude	≤ 2000 m (a.s.l.)

Standards and specifications	
Conformity marking	CE; UKCA
Standards/specifications	EN 61000-6-2 EN 61000-6-3 UL 61010-2-201 DNV UL 2367

Commercial data	
ETIM 9.0	EC001440
ETIM 8.0	EC001440
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	IN
Customs tariff number	85363010000



Environmental Product Compliance	
CAS-No.	11120-22-2 1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Lead monoxide Lead silicate Diboron trioxide Lead
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	b32c6b38-8acb-4713-ba41-a31e9089ed9f
SCIP notification number (Belgium)	98ce4f37-7a53-47bb-8e75-f78fe7c0a170
SCIP notification number (Bulgaria)	3a6e9043-eb26-458e-bab1-c3c216570d55
SCIP notification number (Czech Republic)	eb3aca50-2f42-4ff8-a48c-c2689192a43d
SCIP notification number (Denmark)	b71bc243-6a14-4104-8685-4afcaab2d81f
SCIP notification number (Finland)	d5168b8b-dfdd-4732-aaae-3bfaa59ec9f9
SCIP notification number (France)	e8ebf949-b28b-4d9a-9e11-a681e960a351
SCIP notification number (Germany)	96ebdc4a-6d4a-4b95-947c-274f3d488737
SCIP notification number (Hungary)	2a464243-9905-4fff-bc55-2ffd254e9d5e
SCIP notification number (Italy)	30bca2bc-5ac1-4dec-95d0-9582c48d5f74
SCIP notification number (Netherlands)	1edc6ced-04aa-44f5-a4b9-d16e8c935329
SCIP notification number (Poland)	864b9dfe-fa85-40dd-8514-69fa1aca7fe7
SCIP notification number (Romania)	f6023abb-54ce-461f-87bb-20fa6de4be7a
SCIP notification number (Sweden)	2f5c1de5-de39-4215-866a-90168d171204

Approvals / Certificates

General approvals		Declarations of conformity and manufacturer's declarations
Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	UL E175199 Vol.3 Sec.5
UR Underwriters Laboratories Inc.	-	E175199
Approval		Standard
EU-Declaration of Conformity WAGO GmbH & Co. KG		-
UK-Declaration of Conformity WAGO GmbH & Co. KG		-

Approvals for marine applications		Approvals for hazardous areas
Approval	Standard	Certificate Name
DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA00001D1
Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance787-3861/108-020

Documentation

Manual

Product Manual Electronic circuit breakerV 1.0.025.03.2024pdf7471.95 KB

Instruction Leaflet

Electronic Circuit BreakerV 1.1.111.09.2023pdf2491.12 KB

CAD/CAE-Data

CAD data


2D/3D Models787-3861/108-020

1 Compatible Products


1.1 Optional Accessories

1.1.1 Jumper


1.1.1.1 Jumper




Item No.: 859-410/000-006  
Jumper; for jumper slot; 10-way; insulated; blue




Item No.: 859-410  
Jumper; for jumper slot; 10-way; insulated; light gray




Item No.: 859-410/000-005  
Jumper; for jumper slot; 10-way; insulated; red




Item No.: 859-410/000-029  
Jumper; for jumper slot; 10-way; insulated; yellow




Item No.: 859-402/000-006  
Jumper; for jumper slot; 2-way; insulated; blue




Item No.: 859-402  
Jumper; for jumper slot; 2-way; insulated; light gray




Item No.: 859-402/000-029  
Jumper; for jumper slot; 2-way; insulated; yellow




Item No.: 859-403/000-006  
Jumper; for jumper slot; 3-way; insulated; blue




Item No.: 859-403  
Jumper; for jumper slot; 3-way; insulated; light gray




Item No.: 859-403/000-005  
Jumper; for jumper slot; 3-way; insulated; red




Item No.: 859-403/000-029  
Jumper; for jumper slot; 3-way; insulated; yellow




Item No.: 859-404/000-006  
Jumper; for jumper slot; 4-way; insulated; blue




Item No.: 859-404  
Jumper; for jumper slot; 4-way; insulated; light gray




Item No.: 859-404/000-005  
Jumper; for jumper slot; 4-way; insulated; red




Item No.: 859-404/000-029  
Jumper; for jumper slot; 4-way; insulated; yellow




Item No.: 859-405/000-006  
Jumper; for jumper slot; 5-way; insulated; blue




Item No.: 859-405  
Jumper; for jumper slot; 5-way; insulated; light gray




Item No.: 859-405/000-005  
Jumper; for jumper slot; 5-way; insulated; red




Item No.: 859-405/000-029  
Jumper; for jumper slot; 5-way; insulated; yellow




Item No.: 859-406/000-006  
Jumper; for jumper slot; 6-way; insulated; blue




Item No.: 859-406  
Jumper; for jumper slot; 6-way; insulated; light gray



Item No.: 859-406/000-005  
Jumper; for jumper slot; 6-way; insulated; red



Item No.: 859-406/000-029  
Jumper; for jumper slot; 6-way; insulated; yellow



Item No.: 859-407/000-006  
Jumper; for jumper slot; 7-way; insulated; blue



1.1.1.1 Jumper



**Item No.: 859-407**  
Jumper; for jumper slot; 7-way; insulated; light gray



**Item No.: 859-407/000-005**  
Jumper; for jumper slot; 7-way; insulated; red



**Item No.: 859-407/000-029**  
Jumper; for jumper slot; 7-way; insulated; yellow



**Item No.: 859-408/000-006**  
Jumper; for jumper slot; 8-way; insulated; blue



**Item No.: 859-408**  
Jumper; for jumper slot; 8-way; insulated; light gray



**Item No.: 859-408/000-005**  
Jumper; for jumper slot; 8-way; insulated; red



**Item No.: 859-408/000-029**  
Jumper; for jumper slot; 8-way; insulated; yellow



**Item No.: 859-409/000-006**  
Jumper; for jumper slot; 9-way; insulated; blue



**Item No.: 859-409**  
Jumper; for jumper slot; 9-way; insulated; light gray



**Item No.: 859-409/000-005**  
Jumper; for jumper slot; 9-way; insulated; red



**Item No.: 859-409/000-029**  
Jumper; for jumper slot; 9-way; insulated; yellow

1.1.2 Marking

1.1.2.1 Marker



**Item No.: 793-5501**  
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white



**Item No.: 793-502**  
WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-566**  
WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-503**  
WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-504**  
WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-505**  
WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-506**  
WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-501**  
WMB marking card; as card; not stretchable; plain; snap-on type; white



**Item No.: 2009-115**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.1.2.2 Marking strip



**Item No.: 2009-110**  
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.3 Potential distribution

1.1.3.1 Potential distribution module



**Item No.: 787-3861/000-1000**  
Potential distribution module; 1 potential; with 8 clamping points 0V; Conductor cross-section up to 2.5 mm<sup>2</sup>



**Item No.: 787-3861/000-2000**  
Potential distribution module; 1 potential; with 8 clamping points 24V; Conductor cross-section up to 2.5 mm<sup>2</sup>



**Item No.: 787-3861/000-3000**  
Potential distribution module; 2 potentials; with 4 clamping points each (0V / 24V); Conductor cross-section up to 2.5 mm<sup>2</sup>



1.1.4 Tool

1.1.4.1 Operating tool



Item No.: 210-720  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured